CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1 General. The impetus for the development of a national plan to coordinate the activities of federal agencies involved in post-event data acquisition grew from a charge by the president of the Coastal Engineering Research Board, United States (U.S.) Army Corps of Engineers (USACE), following the ad hoc coordination by several federal agencies in the aftermath of Hurricane Hugo of September 1989. The charge directed that means be explored and, if feasible, a plan be prepared and implemented that would establish procedures for coordinating the activities of federal agencies involved in post-storm data acquisition. In March 1992, the Office of the Federal Coordinator for Meteorological Services and Supporting Research (OFCM)'s Interdepartmental Committee for Meteorological Services and Supporting Research approved the formation of the Working Group for Post-Storm Data Acquisition, more recently renamed the Working Group for Natural Disaster Reduction and Post-Storm Data Acquisition (WG/NDR/PSDA). The first meeting of the working group was held in September 1992.

The motivation for development of a national plan was threefold. The first was to minimize or eliminate the duplication of effort by agencies performing post-event data acquisition. The minimization or elimination of duplicate efforts is directed toward best using the limited resources available to perform these surveys. The second was to assure these highly perishable data are indeed collected. It is generally acknowledged that the acquisition of these data is urgent; that the physical effects which depict the event are transient and can begin to change or be obliterated immediately after the event. The third was to define the coordination procedures of the agencies participating in the acquisition of post-storm environmental data.

1.2 Scope. The procedures outlined herein apply to the conterminous 48 states, Alaska, Hawaii, the Commonwealth of Puerto Rico, and the Virgin Islands, Guam, American Somoa, and the Confederation of Northern Marianna Islands. This plan defines the roles and coordinating procedures of the agencies participating in the acquisition of post-storm environmental data. When only a single agency is involved in a post-storm response, that agency should follow procedures specified in its internal documents, but those practices should be consistent with those contained herein to the extent possible. It is recognized that many federal missions are undertaken in the overall response and recovery process that follows a significant storm event. The intent of this plan is to address an important, though limited, aspect of this response process.

1.3 Examples of Past Responses.

1.3.1 Hurricane Hugo. Hurricane Hugo made landfall on the United States mainland near Charleston, South Carolina, late on 21 September 1989. The U. S. Geological Survey (USGS) District Chief approached the USACE to cooperate in an aerial photoreconnaissance effort of the affected reach of shoreline. The National Oceanic and Atmospheric Administration's (NOAA) National Weather Service (NWS) performed an extensive review of its operations during the event. An informal agreement was reached whereby the USGS would assume responsibility for leveling water marks identified by both USACE and USGS field teams, and the USACE would assume responsibility for acquiring aerial photo reconnaissance in a format acceptable to both agencies.

Over 350 high-water marks were identified and leveled, and over 250 controlled aerial photos covering approximately 150 miles of coastline (from Little River Inlet to Edisto Island, South Carolina) were surveyed as a result of the ad hoc agreement between USACE and USGS. Subsequent to acquisition of these data, the Federal Emergency Management Agency (FEMA) partially reimbursed the USGS for its efforts. Both USGS and USACE published reports based upon the inundation data and aerial imagery. In an independent effort, the NWS performed an extensive review of its operations during the event and conducted a visual damage survey via aircraft.

1.3.2 Hurricane Andrew. Hurricane Andrew made first landfall on the continental United States near Homestead, Florida, early on the morning of 24 August 1992 and second landfall near Morgan City, Louisiana, on 26 August 1992. Three agencies were active in the Florida post-event survey--USACE, USGS, and the Florida Department of Natural Resources, a state agency.

As in Hugo, FEMA mission-assigned the USGS for the post-storm Andrew efforts. The USACE, primarily through the efforts of the Jacksonville District with assistance from the Waterways Experiment Station, performed extensive surveys of federal projects along the east and southwest coasts of Florida. The Florida Department of Natural Resources acquired low-level videotape imagery of the Florida east coast from Palm Beach to Key Biscayne and also performed some high-water surveys. All agencies published reports on their respective findings.

1.3.3 Goals. The goals of the National Post-Storm Data Acquisition Plan (NPSDAP) expand upon the objectives contained in the Terms of Reference document for the WG/NDR/PSDA and include:

a. identifying the requirements, resources, and capabilities of the participating agencies;

b. developing procedures for coordinating agency activities during and following storm events;

c. developing mechanisms for aggregating and sharing resources among the participating agencies; and

d. preparing summaries of event documentation and data acquired under the NPSDAP.

As experience is gained in responding to events and procedures become more refined and efficient, resources available outside the participating agencies should be identified and arrangements made to access these resources. Examples of such resources include aircraft for transport of personnel and for aerial photo-reconnaissance, expertise residing in academic institutions for field assessment and interpretation of storm effects and damage, and data acquired during scientific field experiments involving the same or similar storm events.

Post-storm data acquired or data products prepared by agencies associated with the working group should commonly be available via links on the OFCM Internet home page.